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andrea.dececchis@basf.com
deborah.pinori@basf.com
sonny.nkansa@basf.com

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte VERONIQUE HALL-GOULLE and
ATHANASSIOS TZIKAS

Appeal 2010-002396
Application 10/583,012
Technology Center 1600

Before ERIC GRIMES, FRANCISCO C. PRATS, and JEFFREY N.
FREDMAN, *Administrative Patent Judges*.

GRIMES, *Administrative Patent Judge*.

DECISION ON APPEAL¹

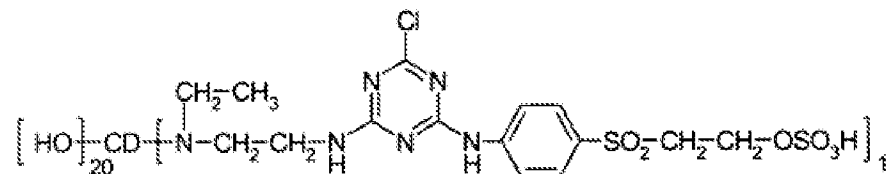
This is an appeal under 35 U.S.C. § 134 involving claims to a reactive polysaccharide derivative. The Examiner has rejected the claims as

¹ The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

being made obvious by the prior art. We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

STATEMENT OF THE CASE

Claims 1-5, 7, 10 and 16 are on appeal. The claims are directed to reactive polysaccharide derivatives having a structure corresponding to a defined chemical formula. Applicants have elected the following species (Appeal Br. 4-5), where CD means cyclodextrin:

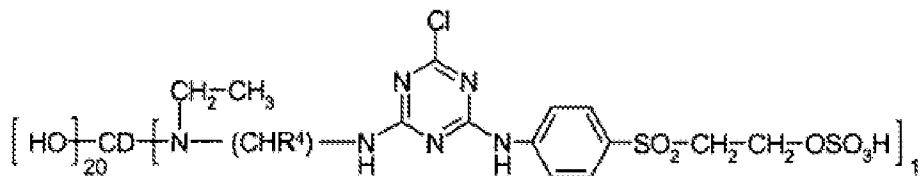


Issue

The Examiner has rejected claims 1-5, 7, 10 and 16 under 35 U.S.C. § 103(a) as being obvious in view of Reuscher.² The Examiner finds that Reuscher discloses “cyclodextrin derivatives having nitrogen-containing heterocycles” (Answer 3-4). The Examiner concludes that, although Reuscher does not exemplify the elected species, it “would have been obvious to one of ordinary skill in the art to prepare the ... elected species” based on Reuscher’s teachings (*id.* at 4).

Appellants contend that the elected species would not have been suggested by Reuscher because the compound suggested by Reuscher that is closest to the elected species has the following structure:

²Reuscher et al., US 5,728,823, Mar. 17, 1998



(Appeal Br. 5-6.) Appellants contend that the elected species would not have been obvious in view of Reuscher because the above compound has a $-\text{CHR}^4$ - group in the chain to the left of the heterocyclic ring, where the elected species has an ethylene ($-\text{CH}_2-\text{CH}_2-$) group, and therefore Reuscher's genus does not overlap the elected species (*id.* at 6).

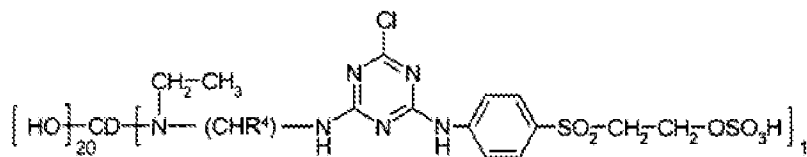
The main issue presented is: Does the evidence of record support the Examiner's conclusion that the elected species of the claims on appeal would have been obvious based on Reuscher?

Findings of Fact

1. Reuscher discloses "reactive cyclodextrin derivatives which contain at least one nitrogen-containing heterocycle" (Reuscher, col. 1, ll. 41-43).

2. According to Appellants, Reuscher describes the disclosed cyclodextrin derivatives

in col. 2, line 30 through col. 4, line 19. The closest generically disclosed compound of Reuscher to the present elected specie is when R is R^2 where R^2 is $-\text{R}^3-(\text{CHR}^4)-\text{R}^5-\text{R}^6$. R^3 may be $-\text{NR}^7$ where R^7 is alkyl. R^5 may be $-\text{NH}-$. R^6 may be a triazine moiety substituted by Cl and by $-\text{NR}^{10}\text{R}^{11}$ where R^{11} may be $-\text{Ph}-\text{SO}_2\text{CH}_2\text{CH}_2\text{OSO}_3\text{H}$. In this case, the close compound of Reuscher is:



(Appeal Br. 5-6.)

3. The above compound differs from the elected species of the claims on appeal in only one position: the moiety designated “(CHR⁴)” in the above formula is a -CH₂-CH₂- moiety in the elected species.

4. Reuscher discloses that “R⁴ is identical or different and is H or OH” (Reuscher, col. 2, l. 41).

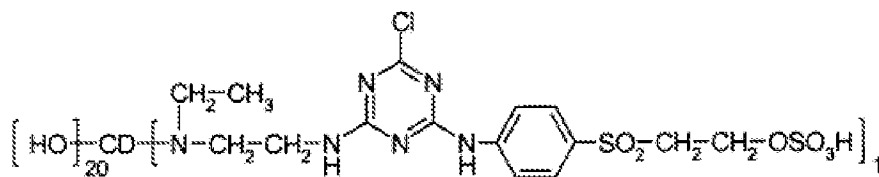
Principles of Law

“[A] prior art compound may suggest its homologs because homologs often have similar properties and therefore chemists of ordinary skill would ordinarily contemplate making them to try to obtain compounds with improved properties.” *In re Deuel*, 51 F.3d 1552, 1558 (Fed. Cir. 1995).

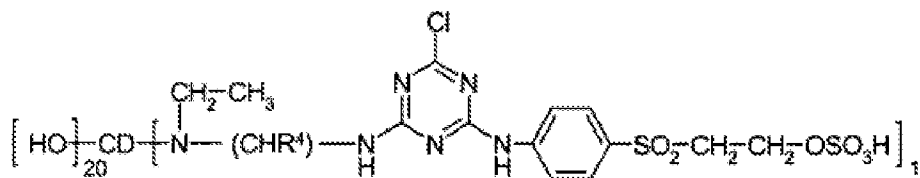
“In patent prosecution, the examiner is entitled to reject application claims as anticipated by a prior art patent without conducting an inquiry into whether or not that patent is enabled. . . . The applicant, however, can then overcome that rejection by proving that the relevant disclosures of the prior art patent are not enabled.” *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1355 (Fed. Cir. 2003). Thus, “a presumption arises that both the claimed and unclaimed disclosures in a prior art patent are enabled” (*id.*)

Analysis

Appellants have elected the following compound as the elected species of the claims:



(Appeal Br. 4-5.) According to Appellants, Reuscher's genus of compounds does not include the elected species, although it suggests a closely related species having the structure:



where R⁴ is H or OH (FFs 2, 4) (see Appeal Br. 5-6).

Thus, the elected species differs from the compound suggested by Reuscher (where R⁴ is H) only by having -CH₂-CH₂-, rather than -CH₂-, separating the two nitrogen atoms in the spacer that links the heterocyclic ring to the cyclodextrin moiety. Given that the two compounds differ only by having an ethylene rather than methylene group in a single position, we agree with the Examiner that Reuscher's disclosure would have suggested the compound of the instantly elected species.

Appellants argue that "[t]here is no overlap of the generically defined compounds ... of Reuscher with the present elected specie, as -CHR⁴- is non-equivalent to present ethylene" (Appeal Br. 6).

This argument is not persuasive. Although the elected species may not be within the scope of the generically defined compounds of Reuscher, a "reference must be considered not only for what it expressly teaches, but also for what it fairly suggests." *In re Baird*, 16 F.3d 380, 383 (Fed. Cir. 1994) (quoting *In re Burckel*, 592 F.2d 1175, 1179 (CCPA 1979)). The compound above that is suggested by Reuscher would have made obvious the elected species because they are adjacent homlogs and would have been expected to have similar properties. *See Deuel*, 51 F.3d at 1558.

Appellants further argue that “[w]hile Reuscher generically describes a number of linkage groups to the polysaccharide including amino, the processes described in this reference (col. 4, line 32 onwards) are silent about amino-derivatives. Reuscher is non-enabling for the generic disclosure where his R³ is NH or NR⁷.” (Appeal Br. 6). Appellants argue that “amino derivatives of cyclodextrins are not known from the literature” and Reuscher does not enable a skilled worker to prepare them (*id.*).

This argument is not persuasive. The Reuscher disclosure is presumed to be enabling, *Amgen*, 314 F.3d at 1355, and Appellants have provided no evidence to show that it is not. Appellants therefore have not met their burden of rebutting the presumption of enablement of the Reuscher reference.

Appellants also argue the claims 4 and 5 would not have been obvious based on Reuscher (Appeal Br. 7) but provide no reasoning to support the argument. Appellants therefore have not provided any basis on which to conclude that claims 4 and 5 are separately patentable from claim 1. Finally, Appellants argue that “claim 16 cannot be obvious” because the “polysaccharide precursors of formula (7) of claim 16 are not at all disclosed by Reuscher” (Appeal Br. 7). As discussed above, however, Reuscher “must be considered not only for what it expressly teaches, but also for what it fairly suggests.” *Baird*, 16 F.3d at 383. Appellants have provided no reasoned basis for concluding that Reuscher would not have made obvious the compounds of claim 16, even if it does not expressly disclose them.

Conclusion of Law

The evidence of record supports the Examiner's conclusion that the elected species of the claims on appeal would have been obvious based on Reuscher.

SUMMARY

We affirm the rejection of claims 1-5, 7, 10, and 16 under 35 U.S.C. § 103(a).

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

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BASF CORPORATION
PATENT DEPARTMENT
500 WHITE PLAINS ROAD
P.O. BOX 2005
TARRYTOWN NY 10591